

The Gymnastics Scoring System

An Honors Thesis (HONRS 499)

by

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Throughout the ages, there has always been admiration shown for physical dexterity. In ancient Greece, physical training played a large role in the lives of the young Greeks who believed that they should be proficient in all phases of life and that structured exercise should play an important role in developing the whole person. Because of their love of exercise, the Greeks developed the Olympic Games which have remained in existence for over 1100 years. Participants engaged in events such as boxing, throwing, wrestling, jumping, and weight lifting which were quite different from the modern routines and apparatus we see today.

After the decline of the Greek civilization, the Romans adopted the idea of gymnastics. While the Greeks had emphasized the grace of physical activities, the Romans believed that the movements could help prepare young men for the military. Youths were trained in various gymnastic movements as a preparatory stage for military readiness. Unlike the Greeks whose philosophy was the beautiful execution of aesthetically pleasing skills, the Romans believed in vigorous, rigid, and heavy movements. Since gymnastics was practiced prominently in Greece and Rome, it is not surprising that gymnastics became dormant when their empires declined. Throughout the Middle Ages the sport was practiced only by knights and warriors who enjoyed jousting and other field sports and by tumblers in the theater. It wasn't until the Eighteenth and Nineteenth Centuries that the value of physical

education was again recognized. This time Swedish and German educators attempted to incorporate physical fitness into a daily routine. In his first written work on gymnastics in the 1700's, Guths Muths, the grandfather of gymnastics, described beam, balance, rope, ladder, and pole climbing exercises. Muths' ideas were further developed by a German, Friedrich Ludwig Jahn (1778 - 1852), and a Swede, Pehr Henrik Ling (1776 - 1839). Jahn is known as the Turnvater (father of gymnastics) because he started a system of Turnen (gymnastics) from which the Turnvereine (gymnastic societies) arose and were later spread to the United States by the immigrants from Europe.¹ Gymnastic societies were founded by these immigrants and soon programs were started in schools and colleges of America. His theory enveloped the concept that the body should be trained for strength through the use of different pieces of equipment. He felt that gymnastics should be a competition between man and apparatus. To fulfill this idea, he redesigned much of the equipment and his then revolutionary ideas are still being used today. Jahn is credited with inventing the horizontal bar, pommel horse, balance beam, ladders, and vaulting equipment. Pehr Henrik Ling introduced his system of gymnastics in Sweden. He believed that gymnastics was a body builder for both the weak and the strong. He also understood what effect movement had on the human body and how injury could occur if movements were forced by performing on apparatus such as Jahn's. Ling advocated

free expression and viewed apparatus and compulsory routines with disdain.

Both Ling and Jahn had good, although entirely different ideas about how gymnastics should be performed. In the beginning, the Ling - Jahn argument consisted only of name calling. The Ling advocates charged that Jahn's movements were violent and dangerous while the Jahn advocates believed that Ling's movements were robot-like. Although FIG - the International Gymnastics Federation - (initials of its French name) had been established in 1881, it had never defined specific rules governing gymnastic routines. For example, at the 1912 Olympics, three different team gold medals had to be awarded because no one had determined which movements were supposed to be performed. If gymnastics were to succeed as an Olympic event, routines and scoring systems had to be defined. The FIG organization decided to combine Ling's and Jahn's philosophies. Ling's ideals of perfect form and rhythm became the basis for compulsory routines, while optional exercises were the creation of Jahn who believed in more of a free style movement which could add difficulty and excitement to the sport. Consequently, from two different cultures, modern gymnastics was born and the Code of Points, which states rules and requirements as well as the values of elements, was created.²

Throughout the years, gymnastics has grown into a world-wide competitive sport. The constant progressions and

innovations in the sport have necessitated changes in the scoring system. Because a number of perfect 10.00's are awarded at every Olympics, the gymnasts have proven that the rules and requirements of the last four years have been mastered. Consequently, changes in these rules are needed to create new challenges and maintain interest.

In every event, a "perfect ten-o" is the highest possible score. Except for vault, these points are divided into categories and are given point values. A comparison between the system from the late 1970's and from today follows:

Late 1970's		Today	
Value Parts (Difficulty)	3.00	Value Parts	3.00
Originality/Value of Connections	1.50	Bonus Points	0.40
Composition	0.50	Composition	1.50
Execution and Amplitude	4.00	Execution	5.10
General Impression	1.00		
	<hr/>		<hr/>
	10.00		10.00

In the 1970's, the values of tricks were rated as either superior (worth 0.6) or as medium (worth 0.3), depending on the difficulty. Each routine had to have at least seven of the difficulties listed in the Code of Points and at least three had to be of superior rating; otherwise, deductions of

either 0.6 or 0.3 were taken. Today, value parts consist of A's, B's, C's, and D's with values of 0.2, 0.4, 0.6, and 0.8, respectively. After every major competition such as the Olympics and the World Championships, the Code of Points committee changes the values of some of these elements as well as add new ones. Values of elements are lowered because as more and more gymnasts begin to perform a certain element, it becomes so common that it is no longer considered as difficult. In some cases, an element may be given a higher rating, but this is quite rare. Similar to the 1970's rule, the required number of each value part must be performed if value part deductions are to be avoided.

Composition refers to the construction of the routine. Generally, it is the variety of moves, changes in speed and direction, and the use of space. In addition to the general rules, specific apparatus requirements are also itemized in the Code. The third category, execution, is simply the way in which the exercise is performed. Characteristics of excellent execution would include optimal extension and posture, lightness of movement, stylish performance, and confident, energetic presentation.

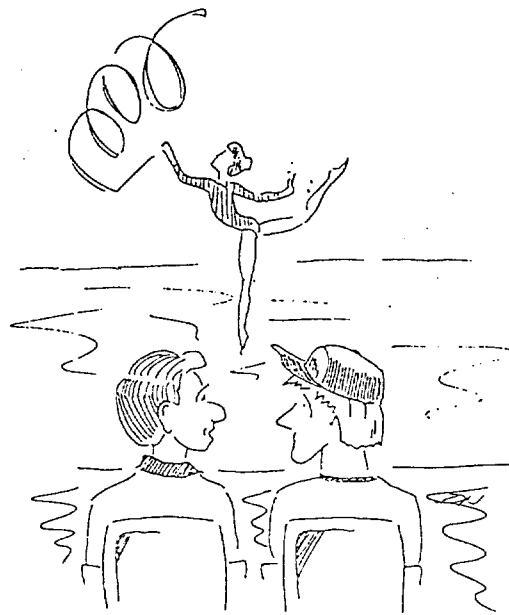
Bonus points refers to the points allocated to originality. In today's system, 0.1 is awarded for the execution of an additional natural D while the other 0.3 is reserved for originality. A natural D is a trick that is given a rating of D straight from the Code of Points. A

value-raised D, on the other hand, is one in which the combination of two or more tricks is considered just as difficult as a single D-rated element and, therefore, is given D rating. Originality is something that can serve as an example without having had a model. It refers to new movements or connections that are performed which go beyond the frame of what is known, traditional, or classical. These elements and connections have values of either +0.10 or +0.20. If a gymnast performs more than the minimum bonus required, she still cannot receive more than a 10.00. Therefore, if two gymnasts perform "perfect" routines -- one having only 0.40 of bonus while the other has, say, 0.90 -- they will tie at a 10.00. Is this fair? Why can't the second gymnast receive a 10.50? After all, her routine was much more difficult, yet done just as well. For example, at the Montreal Olympics, Nadia Comaneci's routines were outstanding. She was awarded 10.00's, but she should sometimes have been given 20.00's to correspond to the very high marks undeservedly given the competitors since the difference in scores did not reflect the difference in quality of the exercises.² Similarly, why should someone who does a nice routine on balance beam, but has one small break and perhaps a step on the landing receive a 9.90 while another gymnast can hit a more difficult routine cold and surpass the other girl by only 0.10 when she should have surpassed her by 0.30 or more? Sure, in today's system the gymnasts are probably being ranked in the correct order,

but shouldn't more that 0.0125 separate one place from another? It is possible that nine places can be awarded in between a 9.90 and a 10.00. The breakdown of that one tenth looks like this: 9.9000, 9.9125, 9.9250, ..., 9.9875, 10.00. The reason for so many decimal places is the number of scores being averaged. It has been thought that more judges means fairer scores. An experiment at the DTB Cup in December 1985 conducted by Ellen Berger and Karl-Heinz Zschocke has questioned this idea. With the help of a computer, the final score was found averaging the scores of 2,4,6, and even 8 separate scores. As a result, "The surveys show that as a matter of principle it did not play any part in that contest of how many judges the jury was made up and how many scores contributed to the final score....In general, the differences were with the girls around 0.1 to 0.2, with the boys from 0.1 to 0.3."⁴ I guess it is true that there must be judges from each of the different countries, but if more and more judges are added and the highest score remains a 10.00, we may begin to see ridiculous scores such as these:



Why not simply forget the idea of a "perfect 10.00" since the concept of perfection does not exist? Instead, a base score should be set and bonus points accumulated to obtain the starting value. From there, execution deductions may be taken to determine the final score. Maybe then, questions like this will not be asked:



*"How would you rate her,
on a scale from 9.975 to 10.0?"*

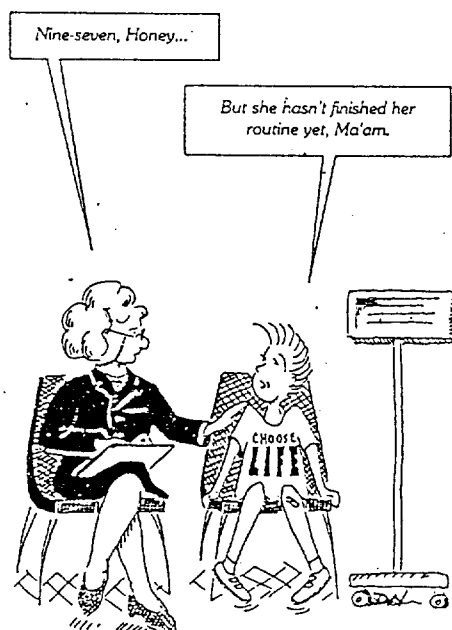
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Also, maybe the proper deductions for execution that are being overlooked now will be taken. For example, how often does a gymnast take a step on her landing and still receive a 10.00? Perhaps the judges realize that the routine was much more difficult than previous routines and since the scores have

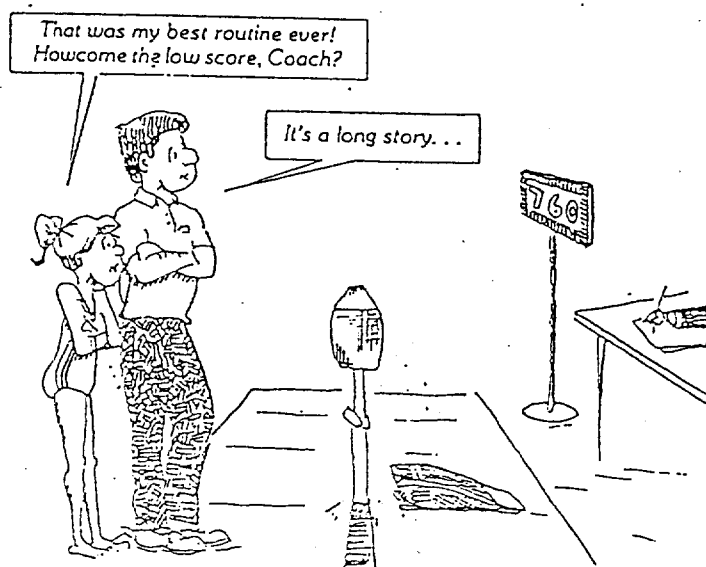
been so high, the only score left is a 10.00. With an "open roof" scoring system, this problem can be avoided. This is not to say that everyone should do such difficult tricks that they give up superb execution in order to gain bonus points. After all, the Code of Points explicitly states that, "assurance, elegance and amplitude should constitute the fundamental characteristics of an exercise."

The scoring for vault is quite different from that of the other three events. In the late 1970's, every vault was valued at a 10.00. After the European Championships in Prague in 1977, it was realized that a change was needed. Nelli Kim did a full twisting Tsukahara and a layout Tsukahara -- two extremely difficult vaults. Nadia Comaneci, on the other hand, did a tucked and a piked Tsukahara. Kim did her vaults well, but with slight mistakes while Comaneci did hers incredibly well. So who should have gotten the higher score? The system was changed so that each vault is now rated according to its difficulty. Today, Comaneci's piked Tsukahara could earn her only a 9.50 when done perfectly. It is quite possible that Kim would be awarded a higher score for attempting the more difficult vault in spite of the slight form breaks. While the idea of rating vaults differently is good, it needs to be employed further. Today, a full-twisting Tsukahara and a double-twisting Tsukahara are each rated at a 10.00. Shouldn't the double-twisting Tsukahara be rated at a 10.50 or more?

Unfortunately, even if we did have a perfect scoring system, there is still the problem of unfair judging. Generally, I believe that most judges try to be as fair as possible, but many people believe that this is not always the case. It is often felt that a gymnast will win a meet just because she is the "hometown favorite". Similarly, it is believed that a score is sometimes based not on the routine that is performed, but on the leotard that the gymnast is wearing. Many people feel that the teams with "reputations" sometimes receive high scores for so-so routines while unknown teams are given lower scores for better performances.



Also, as depicted below, it is possible that relationships between coaches and judges can influence outcomes:



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The order of competition is another factor swaying scores. The gymnast who competes last for a team is often given the highest mark because, in effect, coaches are sending a message to the judges stating, "She's our best."

Another complaint about judging is the inconsistency of scores from competition to competition. In other sports such as basketball and football, a referee may be criticized for a wrong call, but when the ball goes through the hoop or is kicked between the goal posts, points are automatically scored. In gymnastics, everything is evaluated subjectively

causing discrepancies to arise pertaining to difficulty, execution, combinations, and even the number of moves performed. Furthermore, gymnastics is an imprecise science where hundredths of a point are awarded and deducted by split-second decisions.

Judges' qualifications come from credentials, written and practical examinations, seminars, clinics, workshops, and on-the-job experience, but because judges are only human, mistakes are inevitable. Some people believe that the use of video-tape, closed-circuit television, computers, or other machines could be used to solve this problem, but I think that gymnastics is not only a sport, but an art that should not be judged without human emotion.

Although judging standards are constantly being updated to accommodate the difficult routines that gymnasts are now attempting, changes still need to be made. For example, I believe that the ten-point scoring system should be replaced by an "open roof" system. The Russians have already employed this idea in their country.⁵ In competitions today, required elements which are done "perfectly" are deserving of a 10.00 score; therefore, it is reasonable to award an even higher score for a more difficult and innovative exercise. Some people believe, however, that scores should not be awarded at all. They feel that activities such as gymnastics as well as figure skating and diving in which personal opinion is influential in determining scores should not be competitive

sports. But the gymnasts want to strive for more than just personal achievement; they want to strive to be the best. Where else can we compare them besides at competitions with rated judges? Even though the governing body of gymnastics is doing its best to force the judges to conform to rigid rules and act more like computers than like human beings, there will be times when officials will make errors in judgment and will be unconsciously guided by emotions rather than by rules. But many of them have been competitors and coaches and they realize the challenges and difficulties that the gymnasts face. Therefore, the next time there is a competition and a score is flashed, rather than criticize the judges' decisions, commend them for a job well done.

NOTES

¹Peter Tatlow, World of Gymnastics (New York: Atheneum, 1978), p. 8.

²Ibid, p. 26.

³Ibid.

⁴Josef Goehler, "How Many Judges are Necessary?", International Gymnast, Nov. 1986, p. 37.

⁵Brian Cazeneuve, "FIG President Yuri Titov: On Politics, Change and the State of Gymnastics Today." International Gymnast, Nov. 1987, p. 21.

BIBLIOGRAPHY

- Cazeneuve, Brian. "FIG President Yuri Titov: On Politics, Change and the State of Gymnastics Today." International Gymnast, Nov. 1987, pp. 20-21, 43.
- Goehler, Dr. Josef. "How Many Judges are Necessary?" International Gymnast, Nov. 1986, p. 37.
- Jacki, Mike. "Honesty is Still the Best Policy." USA Gymnastics, July/Aug., 1985, p. 4.
- Koszuta, Laurie Einstein. "Gymnastics Through the Ages." USA Gymnast, March/April, 1986, pp. 10-14.
- Normile, Dwight. "Chalk Talk...." International Gymnast, April, 1990, p. 6.
- Normile, Dwight. "Fit to be Tied." International Gymnast, May, 1989, p. 6.
- Normile, Dwight. "GymnPolitics." International Gymnast, July, 1987, p. 6.
- Normile, Dwight. "Scores are No Longer just Numbers; They're Zip Codes." International Gymnast, July, 1989, p. 6.
- Normile, Dwight. "Time for a Few Changes?" International Gymnast, March, 1990, p. 6.
- Strauss, Michael. "Gymnastics." Academic American Encyclopedia. 1987 ed.
- Thomas, Kurt, and Kent Hannon. Kurt Thomas on Gymnastics. New York, NY: Simon and Schuster, 1980.
- Tatlow, Peter, ed. World of Gymnastics. New York: Atheneum, 1978.
- Weiss, Dr. Melford S. "Judging the Women's Judge." International Gymnast, March, 1987, pp. 42-43.